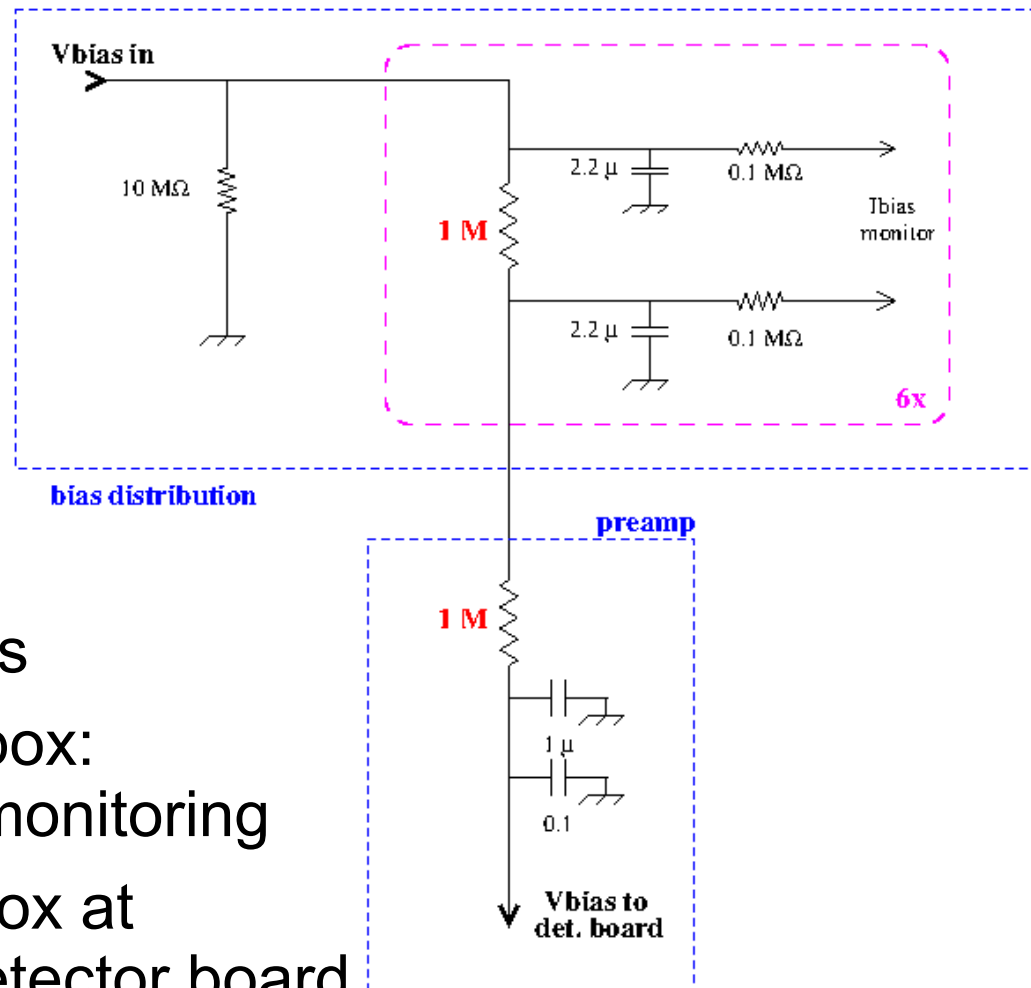


V_{bias} supply \rightarrow detector board

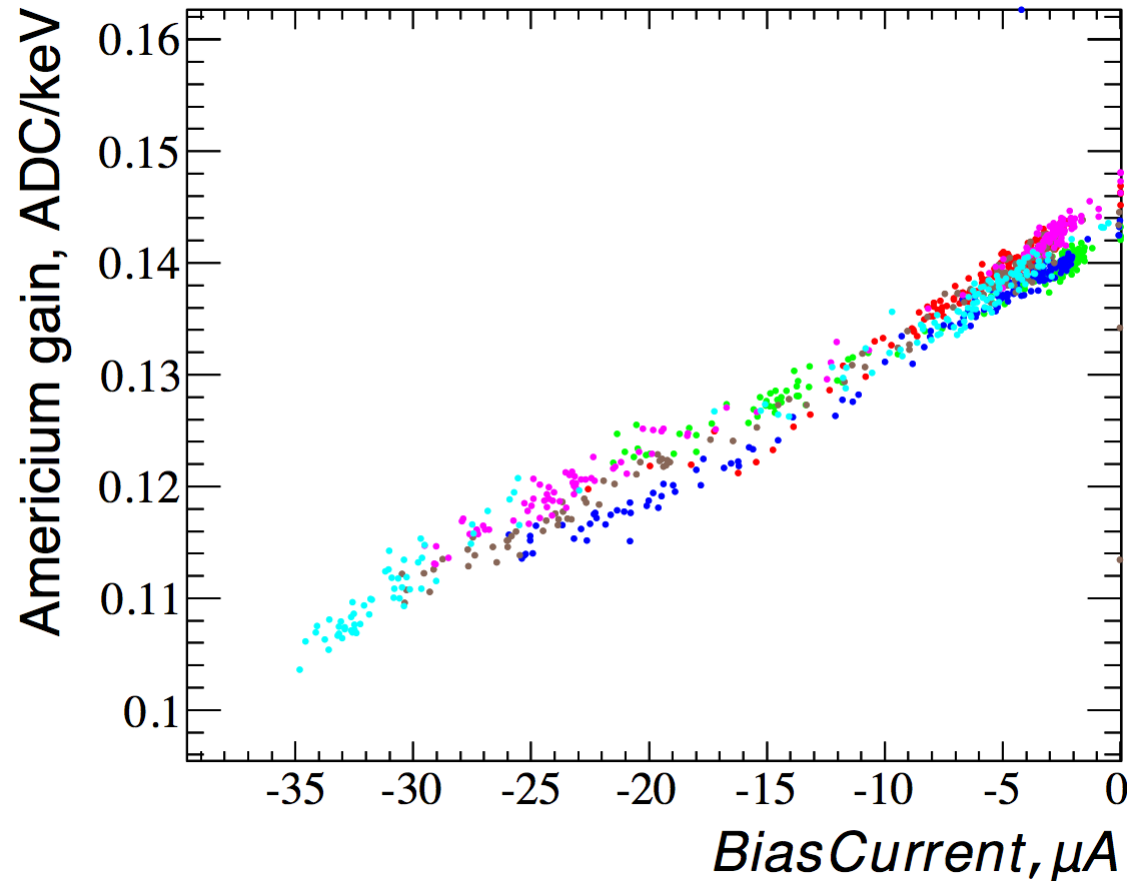


- I_{bias} monitored:
voltage drop
across 1 MΩ
(Keithley 2700
10 MΩ impedance)

- V_{bias} input into bias
distribution box:
6 channels, I_{bias} monitoring
- Sent to preamp box at
vacuum flange, detector board
- Total supply \rightarrow detector board: **2 MΩ**

α -gain vs. I_{bias}

- Observed correlation:



- @ 0 μA , gain = 0.144; @ -30 μA , gain = 0.112
0 \rightarrow -30 μA relative gain reduced to 78%
- 30 $\mu\text{A} \times 2 \text{ M}\Omega = 60 \text{ V}$, reduction in bias voltage at detector board

α -gain vs. V_{bias}

no beams
 $I_{\text{bias}} \approx 0$

- @ nominal 110 V
 α -peak = 155 ADC
- @ 110-60 = 50 V
 α -peak = 125 ADC
- relative gain reduced to 81%
- The voltage drop across $2\text{ M}\Omega$ in series accounts for relation α -peak vs. I_{bias}

